U195.100

"You say 'tomato', I say 'shut the f**** up'." — Selassi Gbogla

January 26, 2000

the cannon

The Official Newspaper of the University of Toronto Engineering Society — Volume XVII Issue V

Strike Negotiations Break Off

Feb. 1 set as deadline for union to accept final offer

From U of T Public Affairs

January 25, 2000 — Talks between the university and the Canadian Union of Public Employees (CUPE) local 3902 broke off Monday night after a 13-hour attempt to end a strike by 2,400 teaching assistants, now in its third week.

The impasse continues to focus on increases the TAs are seeking that the university says are too high and not in line with settlements reached between the U of T and other unions on campus. During last night's negotiations, the university set a deadline of Feb. 1 for the union to accept its final offer. If the impasse continues beyond that date, U of T will proceed with its Feb. 4 deadline by which all courses utilizing TAs must be restructured to ensure their continuation.

"We have already put our best offer on the table," says Vice-Provost David Cook. "The big difference is now there is a time limit to it, because courses will be restructured on Feb. 4 to provide much-needed certainty for our undergraduate students. Our position is a clear sign to the union that we believe they should come back to the classroom. After Feb 1 that offer goes off the table and the university will have to reassess its approach"

see Latest page 3

Nudity! Drag Queens! Godiva Week!

(Clockwise from top left) Sharing love at the Cannonball, stripping down for Mr. Blue & Gold, fresh setting hardhats afire... see inside for more Godiva Week coverage.

Dean of Engineering to hold Strike Information Session on January 27

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Engineers Take the Stage for a Second Year!

By Amanda Goundry

The University of Toronto Drama Festival is back, and for a second year, the Engineers are braving the stage with another dramatic piece! Last year's festival welcomed the first entry from engineers since the festival's rebirth in 1993. The production of *Never Swim Alone* by Daniel MacIvor was extremely well received, as the actors in the festival were awarded Best Performance honours, with a merit award also received for directing. This year, the engineers are back with another dramatic entry, but with a much larger cast – thanks to increasing support and awareness.

The play we are presenting in the 2000 Festival is *A Song for my Mother*, an original script written by Frank Luke. It is a play that compassionately examines the

see Skule™ page 5

Astronaut Julie Payette at U of T

By Jeremy de Souza

On Friday January 21, Canadian Astronaut and Engineer Julie Payette gave an hour long presentation on "Mission STS-96 to the International Space Station: Building the Future." This entailed an update on the current progress of the International Space Station and a personal perspective on her last mission in space.

Julie Payette received her undergraduate degree in Electrical Engineering from McGill University in 1986 and obtained her Masters of Applied Science in Electrical and Computer Engineering at the University of Toronto in 1990. While she earned many academic accolades, she comes across as a strikingly balanced and down-to-earth person. This is no surprise to anyone aware of her diverse interests

see Julie page 4

PEO Student Membership Available on the Net

By Sean Voskamp

The Professional Engineers of Ontario (PEO) are the regulatory body that will gives us our P.Eng designations once the requirements are met. They have just started a student membership program which is open free of charge to all undergraduate engineering students. They have done this in order to create a win-win relationship with students. In becoming a member you will have access to the members section of their website, receive Engineering Dimensions Magazine, and an assortment of other benefits. In return they can inform you of the process of becoming a Professional Engineer in an easier form than is currently available. This student membership is available to any student first through fourth year and can be obtained through the PEO website. Log onto www.peo.on.ca for more information and the application form. It is not mandatory for students to get the membership, but at least check out the site and see what they have to offer.

If you try the site and have any comments, please e-mail them to engsoc@ecf.utoronto.ca.

Are you the proud owner of opinions? email cannon@skul· ca

opinions

the cannon

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SPECIAL THANKS TO
Jennifer Ng, John Wu, Skule™ Book, Chris Davis, and Weller Publishing.

Established in 1977, the cannon is a monthly publication of the University of Toronto Engineering Society, with a circulation of 2000 copies throughout the University of Toronto St. George Campus. The mandate of the cannon is to publish information that is pertinent to the Engineering student body.

Subscription information is available at the Engineering Society at 416-978-2917. For advertising rates, production deadlines and other information, please contact us at cannon@skule.ca

PLEASE NOTE
the cannon is a medium through which undergraduate engineering students can express their opinions. The views expressed herein are those of the author and do not necessarily represent those of the editors or the Engineering Society unless so indicated.

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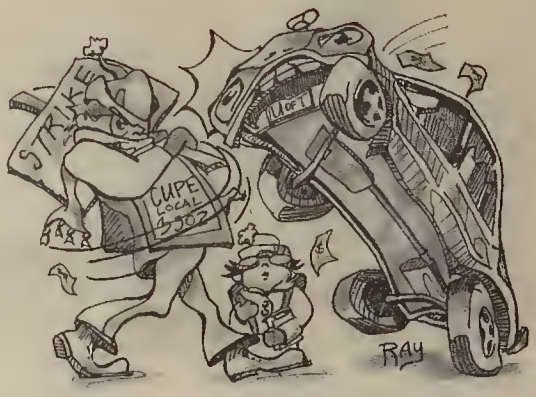


editorial

The university puts a second offer, less than the first offer that the T.A.s rejected, on the table. Not surprisingly, the T.A.s reject it. With the February 4th deadline for course restructuring looming ominously in the horizon, things seem bleak for our teaching assistants. They're cold, they're running out of firewood, and it seems as if they'll soon be out of work.

The next few days are crucial: our education post-February 4th depends on the events triggered by this latest rejection, as does the situation of our 2,400 teaching assistants. If only both sides would show some sort of sign that they were working towards a reasonable compromise, some sort of sign that they were actually listening to the other party.

As students, we should get informed, listen to both sides, and recognize the middle ground – the place that seems to be getting overlooked. It sometimes seems as if we are only pawns in this "Gimme. No. Gimme. No" game. We are actually in a position to move this situation from its present gridlock towards a reasonable compromise. (See you on Thursday afternoon).

JEAN

Celebrate GradBall with a case of champagne courtesy of the Alumni Association!

(just get everybody in your class to give to GRAD*itude*... that's all.)

Want to be part of next year's Cannon staff? Get a head start. email cannon@skule.ca

letters

Re: Thanks for FFAD
Remember Frosh-for-a-Day? I do — as a big success. On behalf of the Faculty, I would like to thank all students and staff who volunteered their time and energy for FFAD back in November. Special thanks to David Traub-Werner, Marcus Lam, Josephine Chen, Garo Jamjekian and Ian Collins for their unlimited enthusiasm and creativity. (A talk show format? Who would have thought...)

As a token of our appreciation, please feel free to pick up a complimentary U of T key chain and coffee mug from Andrea in the Engineering Student Recruitment Office, GB157.
— Vice-Dean Will Cluett

re: massmail@ecf

Re: job offer
Hey everybody, I got a job! I'm looking forward to starting as a Junior Engineer at Motorola in May. Some things key to getting the job were my PEY internship there and the high opinion my manager has of the quality of education at UofT. It's a great place to work, in terms of the quality of people you meet and the diverse opportunities to apply my communications SW/HW knowledge.

Being from Engineering Science allows us to brag that we work well under pressure and are able to 'think out of the box', to use a cliche'. So to those poor, suffering 2nd-year Design students I say, "it's worth it!", and, "don't forget that you're here to learn much more than math and science; you're here to learn what success means to you and how to achieve it."
— Michael Barker, EngSci 9T9+P

Re: TA strike affecting me
No assignments are due, hence I'm falling behind in some classes because I don't feel pressured to do them.

In one class, the prof is looking to changing the final to 100% of the mark unless the strike ends soon. That's gonna suck.

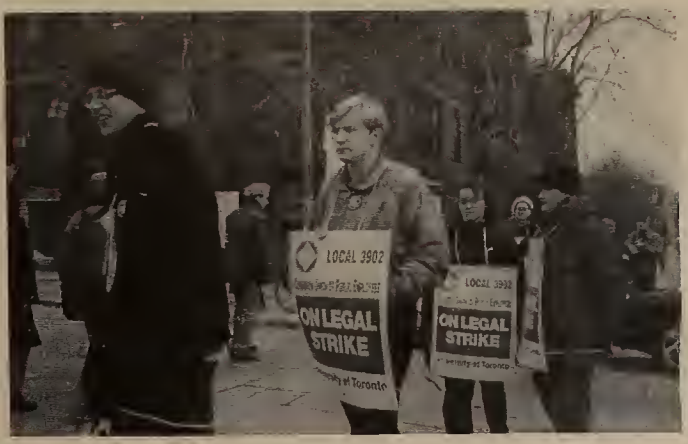
For my grad courses, we really havent been affected at all. Mostly being bothered in the undergrad courses with assignments and tutorial/lab cancelations.
— Yuval Grinspun, Civ 0T0

Re: Refund from strike
Concerning the TA's strike, will we be getting a refund for the classes not given? If not we should.
— Thomas Patricio, ECE 0T0

Re: TA strike
No. It has not affected me. I still have 6 hours of labs a week, and 9 hours on alternating weeks. I still have three 8am classes. And worse, I still have Skulework that I should be doing right now.

Now a prof strike...that'd be something different!
— Name Withheld

the TA strike



Teaching Assistants brave the cold to picket at the mouth of King's College Circle.

Message to Undergraduate Students regarding the strike by Teaching Assistants

Michael E. Charles — Dean

As I indicated in my recent e-mail message to you and course instructors, I greatly regret that negotiations between the University and CUPE Local 3902 representing teaching assistants were unsuccessful and have resulted in a strike.

Course instructors are doing their utmost during the strike to maintain as positive a learning experience as possible for undergraduate students. I am hopeful that renewed bargaining between the University and CUPE Local 3902 will take place in the near future and that a resolution will be achieved before the February 4th deadline for irrevocably restructuring grading schemes and courses as outlined in my e-mail message to you dated January 19th. Please read this message because it incorporates important information distributed by the Provost.

I am aware that many of you have raised the issue of a partial tuition fee rebate. I am hopeful that renewed bargaining will yield a resolution of the TA situation before February 4th in which case laboratories and tutorials can be restored. In the meantime, I have passed the general expression of concern on to the Provost.

I am asking all to be patient during what continues to be a difficult time for all of us — undergraduate students, teaching assistants, administrative staff and faculty.

Strike Info Session Announced

from the Engineering Society

On Thursday, January 27 at 5:00 pm, the Engineering Society and the Faculty have organized an information session where engineering students will have the opportunity to get answers to several good questions regarding the saga between our teaching assistants and the University:

1) Is there going to be a refund if the T.A strike is continued?

2) Does the lack of labs and tutorials affect our P.Eng or CEAB accrediation?

3) How much of our tuition goes towards T.A's, Labs and Tutorials?

4) Do Engineering T.A's have the same reason to be on strike as the Arts and Science T.A's?

5) Does U of T feel comfortable with providing a substandard education?

6) Is the Feb. 4 restructuring date the same as firing all the T.A's? Is this legal?

If you have any additional questions, email them to engsoc@ecf.utoronto.ca

For the latest on the TA strike, visit these webpages:

University of Toronto News	http://www.newsandevents.utoronto.ca/strikeinfo
CUPE 3902	http://www.cupe3902.org

CUPE: Why We Are On Strike

from www.cupe3902.org

Our Union has been in negotiations since June 29, 1999. Our members sent us in with a strong message that tuition relief was a vital issue. They also told us that they wanted more job security, some real dental and vision care benefits, and wage parity with our colleagues at York. On 6 January 2000 — after the strike deadline — members rejected the administration's latest offer because it only contained improvements to the job security (subsequent appointmentsts). Members chose to strike as of 7 January if no settlement was possible. We were then locked out as of 7 January at 3pm. Our members remain firm in their demand to get relief from tuition increases, get wage increases and get real dental/vision care benefits. This strike is a principled strike for a better contract that recognises our members needs. The UofT can afford to settle (they had a $50 million surplus last year). Let's get back to the table and get a good contract.

The Union would ask all students to help support the strike. If you are a graduate student, tell you profs that you feel uncomfortable crossing picket lines to come into class. See if the prof will cancel or move the class.

If you are an undergraduate student, please understand that although our strike inconveniences you, it was our only option. If your department has hired a "replacement worker" to cover for the class, complain to the department. If you can arrive for classes a little early, we would appreciate you walking the line with us before you go in to class.

All students should know that University policy protects your right not to cross a picket line. You cannot be academically penallized if you choose to not attend a struck campus.

The more you support our strike, the shorter it will be and we can all return to work as normal.

Latest Offer Rejected by TAs

continued from page 1

The break off of talks is disappointing to the university — obviously frustrating for both the union and the university," Cook said. "But the gap between their demands and what we can offer is simply too large to be bridged."

Michael Swayze, chief negotiator for CUPE 3902, criticized U of T for coming back to the table with the same offer that was already turned down before the strike began. "We spent 13 hours to get nothing," he said. "Until last night we thought that when U of T came back to table there would be some extra money in there. People don't say no to something, stand out on the streets freezing for two weeks and then say yes. There's something called pride here. Until they bring the people to the table who can really bargain with us, we'll be months on the line and it will damage U of T's reputation."

skule™ news

A New Breed of Engineers: An Update on The Jeffrey Skoll B.A.Sc./ MBA Program

by Jeremy de Souza

It is well known in industry that the most sought after employees possess solid technical backgrounds combined with strong aptitudes for business. In today's increasingly digital and knowledge based economy, such contrasting yet essential skills are rapidly evolving from being assets to being requirements. The University of Toronto, particularly the Faculty of Applied Science and Engineering in conjunction with the Rotman School of Management are preparing to formally announce the Jeffrey Skoll B.A.Sc./ MBA program in the new year in an effort to cultivate such multi-faceted engineers.

The program has a projected length of six years (seven with PEY), during which students will be able to obtain full-time work experience in a compulsory internship program. This component referred to as the Management Experience Year is proposed to span twelve months. Students will be fulfilling all criteria required by an undergraduate engineering degree in addition to that of a Master's of Business Administration.

Viable candidates for the program would have completed their third year of study and are currently on PEY ending August 2000. Such candidates would apply for the program by June 15, 2000. In the future students will not need to take part in the PEY to be eligible for admission into the program.

The first MBA courses pertaining to the program are projected to be offered in September 2001. The program is predicted to have a limited enrollment due to its unique nature. Consequently, admission is expected to be highly competitive in the program's infancy. Admission requirements will be similar if not identical to those for entry into graduate studies. The program will be open to third year students from all engineering programs, however direct admission into the combined program is not permitted for students applying to U of T for undergraduate entry. Specific details regarding application procedures will be provided by the faculty in March, 2000.

The development of the structure of the program is being handled by an implementation committee co-chaired by Dr. R.D. Venter from the Department of Mechanical and Industrial Engineering and Professor Peter. H. Pauly, Associate Dean of Research and Academic Resources of the Rotman School of Management. The committee is confident that this innovative program will be highly successful in facilitating the transition of Skule's engineers into the business world.

Looking for the perfect way to express your undying love?

Skule™ Nite 2000 proudly presents

Valentine-o-grams

on sale Feb. 2 – Feb. 9 @ noon in the SF Atrium
1 for 50 cents, or 3 for $1!
Delivered Feb. 10 and 11.

Julie Payette

continued from page 1

such as scuba diving, flying and involvement with the Tafelmusik Baroque Orchestra Choir in Toronto. In addition, she speaks five languages including English, French, Spanish, Italian and Russian.

Following her introduction by the Dean of Engineering Michael E. Charles and the warm welcome by a crowd which filled most of Convocation Hall, Julie Payette began her presentation with a strong commitment to the notion of teamwork as the framework for improving our lives. "Teamwork is the fuel that allows common people to accomplish uncommon goals" said Payette relating this directly to the International Space Station which is being constructed by several collaborating nations (including Canada). Canada's major contribution to the station will involve an improved version of the Canadarm essential to the completion of the ISS by 2004. Presently, the ISS has two operational modules named Zarya and Unity, each constructed and launched by the Americans and Russians respectively. The astronaut extended the notion of teamwork and collaboration to her American and Russian crewmates who, prior to becoming astronauts, trained as combat pilots to defend their countries against one another.

Mission STS-96, on which Julie Payette flew, was primarily a supply and logistics mission comprising of the installation of equipment needed for future space flights and inhabitants of the station. Ms. Payette shared a home video of the inside of the station filmed in orbit that offered a first hand view of life in a zero-gravity environment. Also presented were photographs taken from orbit of various locations and phenomena on earth ranging from Mount Everest to the Northern Lights.

The presentation included a question period where members of the audience asked questions spanning from the effects of space on one's health to the hundred million dollar question, as referred to by the astronaut: How does one go to the bathroom in space? When asked about what was the most important thing she learned from the University of Toronto, she answered patience, a quality much needed when doing graduate studies.

Julie Payette concluded her presentation by commenting on her opportunity to experience space flight as being a great privilege to view earth from a different perspective. The accomplished astronaut then presented the University of Toronto with a commemorative montage that displayed the STS-96 mission patch and a series of symbolic images.

Ontario Engineering Competition Comes to U of T (And it's free!)

by Mark Ebden

YOU can win thousands of dollars, meet interesting people, and practice the "soft skills" that employers love to see. From March 3 to 5, Engineering students at the University of Toronto are hosting "OEC 2000" — the Ontario Engineering Competition.

ALL Skule undergrads are eligible to compete in one or two of the following categories:

Explanatory Communications
Editorial Communications
Corporate Design
Entrepreneurial Design
Parliamentary Debate
Team Design

(The exception is Team Design, which across the province is restricted to Frosh.) The cost for all U of T competitors is NOTHING, thanks to the generous support of Dean Michael Charles.

What is the OEC? It's a weekend of fun and competition. As a competitor you will typically spend part of a day focused on your own category, but can explore the other goings-on during the remainder of the weekend. There are social events and networking opportunities, delicious dinners and more.

A range of project possibilities are possible. E-mail us if you are not sure whether yours is applicable. To give some examples:

- learn about a topic and present your findings in Explanatory Communications,
- research an ethical question and defend a position in Editorial Communications,
- tackle a real problem faced by an industry today, in Corporate Design,
- design something neat in Entrepreneurial Design
- debate impromptu topics in Parliamentary Debate
- solve a neat problem in three hours, using everyday materials and a budget, in Team Design

Also, your thesis or design project (from any discipline) could be eligible in Corporate or Entrepreneurial Design.

The application deadline is January 28. Pick up your application form in the Engineering Society Office (SF B670) and drop it off in Wallberg Room 341.

If you have any questions, e-mail oec@ecf.utoronto.ca. And if you made it this far down the article, you are probably interested in OEC! Please visit our web site at www.ecf.utoronto.ca/~oec.

See you in March!

skule™ news

Skule™ Enters Hard-hitting Piece to U of T Drama Festival

continued from page 1

horrors of Alzheimer's Disease. It is a hard-hitting piece that covers a period of fifty years, from 1993 back to the time of World War Two. Central to the play is Nancy Mappin (played by Anna Edwards), a woman of 77 when we first meet her. The plot is facilitated through the Coroner (Dan Straus) who conducts an investigation into the somewhat unusual circumstances surrounding her death. Through testimony and memory of her children Jack (Ashley Morton) and Laura (Lisa Cataudella) we are skilfully taken through Nancy's life, from the age of 24 where she sings is a rowdy English pub, to the final years of her suffering. *A Song for my Mother* proved to be a challenging piece for all involved, tackling song, dance, and the ability for the actors to stretch back and forth in time. As a finished piece, it should prove to be another strong festival entry, hopefully confirming that the engineers will be represented in the University of Toronto Drama Festival for years to come.

The 2000 Festival runs from January 26 –29, with a record number of 10 shows from 7 colleges and faculties. *A Song for My Mother* (the engineering entry) will be performed on Thursday January 27, the second night of the Festival. Tickets are $5 for students, $10 for non-students, and are available at the Hart House box office. For those who are interested in attending the entire festival, a special package is being offered this year where students can see all 4 nights -10 plays - for only $15 (non-students $30). The following describes the performance order of the Festival:

Wed, Jan 26: Eloisa & Abelard (Trinity), The Man who Couldn't Dance (Scarborough) Thurs, Jan 27: This is a Play (Scarborough) , 15 minute Hamlet (St. Mike's), A Song for My Mother (Skule™) Fri, Jan 28: When Children Fall (Erindale), When we Finally Met (St. Mike's), Hell Of a Smoke (Theatre Offstage) Sat, Jan 29: Coll.Works of Billy the Kid (Erindale), Just Another Day on the Hunt (Hart House), Skule™ Nite Performance, Awards Ceremony.

ASME Nite a Success

BY NIR BALACHANDRA

The American Society of Mechanical Engineers(ASME) UofT chapter is pleased to announce the success of the ASME Nite held on December 3, 1999. The event was held to get both ASME members and non-members aware of the UofT ASME club. The highlight of the event was a balloon drop contest, and the
winner leaving the scene with a case of beer, 24 bottles in total. The purpose of the competition was quite simple, design a flying object to have the longest hang time with a given supply of materials chosen by the ASME club. The materials consisted of balloons, strings, straws, paper and a little space-men figurine. The competition saw 8 teams vigorously completing to design a flying object with the given supply of materials. The team Avro-Sci walked away the winner having beaten all the others for the longest hang-time.

We at ASME would like to thank all those who participated and further congratulate the winning team, Avro-Sci. This year, the ASME club is planning on having movie nights, plant tours and other great events so come check us out.

ESSCoFIQ Conference Report

BY PAUL GRAHAM — VP-EXTERNAL

This past November saw the second ever ESSCoFIQ conference. Ok, so you're wondering what this ESSCoFIQ thing is... it was a conference that saw ESSCO (Engineering Students Societies Council of Ontario_ and COFIQ (Quebec's Equivalent of ESSCO) gather at some remote place north of Montreal. The purpose of this conference was to learn from each other's organizations and see what the guys (an girls) across the borders were doing. Attending the conference along with myself were your President Sean Voskamp, your SAC engineering representative Magda Wierus, and Social Committee member Kirsten Koehl.

After meeting and greeting everybody Friday night (along with getting in trouble for making too much noise) we awoke bright and early on Saturday morning to start with the workshops. The first order of the day was the CoFIQ information session, a place where we learned about the inner workings of our CoFIQ counterparts. A good idea came from the meeting: to make ESSCO become more politically active. It's a great way to get your message across to those who can actually change legislation and improve conditions for students. There has been resistance to this idea in the past, and it is likely to encounter resistance now.

The next workshop discussed the increasing need for technical skills in today's workforce (mainly computer and electrical engineering). Statistics show that the need for these types of skills increases approximately 20% each year, whereas enrolment in these types of courses only increases about 5% a year. Schools in Quebec had been unable to prod their provincial government into providing the resources or the initiative to do something about this problem. We discussed the Ontario government's approach to alleviate the problem. Ontario's bid to deregulate tuition for the universities that double their enrolment in these disciplines, and the kickbacks provided to universities per capita. This simply adds insult to injury as the only people really benefiting from this are the universities and big corporations who need people to work for them. The students will be shafted by higher tuition fess, larger class sizes, and a devalued diploma (the more accessible the program, the higher the enrolment, more graduates, leading to a more common and less valued degree).

There was a workshop on course evaluations and how different schools deal with this issue. From the information shared in the discussions it seemed like all the schools in Ontario, and almost none in Quebec have the power to kick people out based on evaluations. It was agreed that the purpose of these evaluations is to provide a basis for improvement in the way courses are taught. The main difference in how the evaluations were done is how the information is made available to the students. Some schools make their information available on the Internet, while like us, others do not receive any feedback.

The next workshop focused on university-industry relationships. Due to lack of funding, schools in Quebec have begun to integrate professors that are being paid by companies to teach courses. There were a lot of negative feelings about this because the course becomes biased with only company information being offered. Situations have arisen where companies have backed out of providing jobs for the students, who have been specifically trained for these jobs. It was suggested that companies donate equipment to schools, but once again the machines are then designed for their product. There was an incident in which a company logo "Bombardier" was used for a course. This raised a lot of questions about exactly who is dictating what is being taught in the courses. Many of the societies have contracts with Coke or Pepsi in order to make extra money, but when the contracts are associated with the university, the society is not capable of dictating prices. Last year a Pop Exculsivity contract was proposed, but was rejected by students in favour of keeping control of our vending machines.

The last (but not least) workshop I attended was the Brain Drain information session. Some interesting numbers came from the discussion. In 1989, 17,000 graduates took their knowledge and fled south, while in 1997, the numbers increased dramatically to 98,000. Here's why: Companies in the States usually offer average salaries that are 30% higher than in Canada, without factoring in the exchange rate. Other attractive options include stock options, providing moving and any set up costs incurred by translating your permanent domicile to their humble abode. Now this is insane! The one method Canadian companies could beat that would be if the government lowered taxes and made it appealing to stay in Canada. Another suggestion was to have a tax freeze on a newly graduated Canadian student for about 4-5 years. This would get them settled in their job and help them pay of their student loan so money would not have to be a major deciding factor in the choice. Some possible informative solutions given would be to have companies, the Ontario government, the Canadian government and the Professional Eengineering Council pay for informative posters to be made for National Engineering Week. These posters could be hung around schools and such to give people something to think about when considering a job in the States.

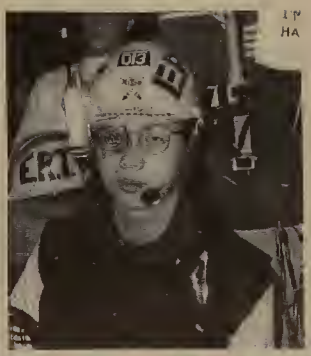
It probably doesn't cross a person's mind how much they are hurting their country when they leave it. Higher paying salaries do not guarantee good work, a fact that needs to be understood. We need to start showing that we value intelligent Canadians (professors in universities, CEO's in companies) in order to strengthen the economy; in turn, Canada will prosper economically and use all its natural resources to build Canadian pride with our own knowledge and advanced research facilities, not just our outstanding beer products (I don't even like beer, by the way).

In general, this conference was a great learning experience, and I think that if I was to attend another conference I would be able to benefit from it more, because of what I learned. It was a blast. Not to mention that the Western delegation mooned us for prolonged periods of time on the drive home.

bribery. scandal. alcohol. scantily-clad men. nude men. alcohol. a drag queen. one hell of a chariot race. alcohol. rocket-launching hardhats. a few seconds with a sledgehammer. alcohol. All the necessary ingredients for a week of fun, revelry, and merriment.

GODIVA WEEK

SAC Prez Matt Lenner. Say, Matt... what's a five-letter word for traffic cone?



The rocket launching hardhat that won the contest. See page 11 for more about the Frosh Hardhat Contest.

EngSci Chariot Driver and Cannon Editor Jean Cruz.

Godiva Week was absolutely awesome, although it meant I drank too much, smoked too much, and got absolutely no work done.

— Althea Barthos (MECH 0T3)

Y2K OK

by Susmita De

My sister predicts that someone's gonna get sued about this entire Y2K mess. What mess you ask? The mess of millions of dollars wasted on all the Y2K compliant crap. The "mess" is the deep fear instilled in folks that Armageddon, a buff, balding man standing in front of a waving American flag while a whiny version of "I'm leaving on a jet plane" plays in the background, was to befall us when the clock turned 2000. But NOTHING HAPPENED. Don't get me wrong, I'm glad that nothing horrible happened. In fact I'm ecstatic. But c'mon, did the Y2K bug really deserve the fear that it received? Or was it all just a clever marketing scheme? There was even an art gallery somewhere in artsy land that was devoted to "depictions of the Y2K bug". Whatever. Tawlk to me over cwaffee.

Okay, so this article is supposed to be about my New Year's. So here goes... The eve of the millennium proved to be one of the most exciting days in the De family history. The goal: to celebrate New Year's at the Great Pyramids of Giza. The real excitement: actually getting there. It's around 9 PM and we're in a newly painted black and yellow taxi. It's the kind of taxi that you would not even dare rest your head on the door for fear of it falling off. This would mean you propelling into the black hole of Egyptian traffic, because of course, seatbelts are non-functional accessories. By around 9:30 we realize that we were in a traffic jam, and surprise, everyone is going to the pyramids to celebrate. After moving 2 feet in a time span of, oh, let's say, 30 minutes, our trustworthy taxi driver assuredly tells us that the Pyramids was only a 5 minute walk from where we were sitting, and our best bet was to walk. So we happily pay him, with a hefty tip for his patience, and start walking. And walking. Then we walk some more. So we ask someone in a non-sensical language, a blend of English, Arabic, and wild hand gestures, exactly where the Pyramids were. After a few minutes, we learn that it's actually only 5 kilometers further down a jam-packed road. Oh.... okay. So we literally jump onto a bus with army guys on it because someone bellowed the words in rough English to four obviously confused and lost Indians, "party at pyramids?" But anyways, long story short, we slowly inched our way towards the pyramids, then right past the pyramids, and then finally back towards the pyramids. And now it's 11:45. The young Egyptians in my bus are singing soccer songs ("Alle, alle, alle!" And then I think someone started singing a Ricky Martin song). The bus stops and we jump out. We cannot see the pyramids... . and you'd think they would be big enough to see from a distance, but we just follow the crowd (someone has to know where they're going). Masses of people are running across rocks and sand, just to make it to the pyramids on time for the countdown. And then there's my family: two parents lagging behind, screaming their kids' names, warning them to not run too fast, cuz you just know what could happen in a crowd... young hooligans screaming, hitting people, creating general havoc; you know, what people usually do on New Year's. This is called parental paranoia. But we eventually get to the gates, and it's 11:55 and the guards are insisting on decorum and that everyone must go through the metal detector and get a friendly body pat. We're in the back of a large crowd, and thinking we're gonna spend New Year's staring at a sleepy old guard with long nose hairs telling us to empty our pockets. The crowd gets restless. My father's grip on my arm gets stronger - "No you cannot take two steps away from us to take a picture... you could be swallowed up by the crowd... ". The fireworks are doing their magic, and we can barely make out two of the Pyramids just over a sand dune. We're getting antsy because the security guards are taking too long in letting people through the gates. Then people just start running to the top of the sand dune and towards the Pyramids. They're dodging the security and they begin to invade the land that is theirs. Police on camels were chasing and whipping these "hooligans" who dared to circumvent their top-notch security gates (red tape). But there were too many of us, and so few police on camels, so we surged through, and at 11:58 we were on top of a sand dune staring in amazement at the mastery of workmanship that built these truly Great Pyramids. We stood in awe of the fireworks, the cool techno/rave music playing in the background... and the freaked out camel running back and forth. It was just amazing. I think at that moment we all realized that this wasn't just another day. It wasn't Armageddon; it wasn't the beginning of the Y2K plague. It was a day of retrospection. I came to the realization that we are so tiny and insignificant compared to the history of earth. How egotistical of us to even think that a man-made creation could single-handedly bring down a civilization, a planet that has seen many millenniums come and go. We just stole a glance at a single transparency of history.

In Defense of the Y2K bug...

by Pierre Duez

Since the first week of January, when the media worldwide stopped holding their breath waiting for a great calamity to befall us all, it has been pretty much accepted that the computer ramifications of Y2K were not as catastrophic as many of us had feared. Right away, the media started looking for a scapegoat.

Their first reaction? The computer analysts and consultants, who caused billions upon billions of dollars to be funneled away from other projects, so that computer systems could be made Y2K-ready. Company policies worldwide changed to freeze computer projects in the works, so that the Y2K precleanup could be as "painless" (a relative term, of course) as possible... the lost productivity is estimated to have tacked another few million (if not billion) to the price tag. So of course, the people who suggested all these massive preparations for a New Year that came in less with an apocalyptic "boom" than with a meek "phht" are the ones at fault. The money for these repairs, changes, and inconveniences was misallocated. We were duped.

And if you believe that, then I hope that you're not in the computer field. The people who "consumed" all this money – the programmers and Engineers who worked those long hours, for all of that overtime pay, deserve our thanks rather than our scorn. This is probably (and feel free to reply to the Cannon if I'm wrong on this one) one of the largest projects undertaken whose successful outcome was ... nothing. It was a purely proactive measure, the sole intent of which was to cause something bad not to happen. Success was defined as a non-event.

And in this respect, the people behind the scenes succeeded admirably.

If this still sounds like claptrap, let's look at things from a slightly different tact: what if we had spent no money on the whole "Y2K Bug" problem? What if we had said "the impacts will be minimal... certainly nothing we can't handle quickly, should inconsistencies arise." Come the new year, we would have had more than our fair share of problems. It wouldn't only be comical goof-ups like the Blockbuster client who got charged $90,000 (U.S. – like it makes a difference) for an overdue video. We would not only be reading about the registry office in Britain, where so-called "millennium babies" are having the year 1900 printed on their birth certificates (they had to resort to pen and paper for a while for that one).

The "glitches" would cover everything from banks calculating negative interest on savings accounts to seniors being deprived of social security, to power loss on a very, very large scale. The financial issues would be a problem, but I concede that those could be sorted out before too long. Some people would suffer hard times for a bit – no heat (from unpaid bills – another glitch), no money, etc. – but they would, I am sure, recover eventually. And the cost in terms of hours spent frantically trying to patch systems might even be no more than a fraction of what we spent on the date rollover. Already, here, we're turning a blind eye to lawsuits that might occur as a result of these misunderstandings. As well, we have that last scenario: power goes out (as well as other important utilities). What's the problem? Well, it's a software issue. So what do we need to do? Let's fix it. Call up the programmers... whoops, phones are out, too. (I didn't mention that? I guess nobody really saw it coming, so no one took it into account.) Well, the programmers will be by soon, I'm sure.

Meanwhile, everyone else who is having computer problems doesn't really know about them yet, because they don't have power to their machines. Backups only last so long, and there's no guarantee that this entire mess can be fixed in time.

The problems trickles through, has waves upon waves of repercussions. Nobody is really ready to take care of this mess, so people who actually know how to fix the systems are in high demand – and short supply. The public is panicking (as publics are very good at doing at the drop of a proverbial hat), adding to the confusion and pandemonium already in abundant supply.

I can't trace the full route of problems – my imagination is nowhere near vivid enough. But please don't get me wrong, here – I am not (and never was) one of those doomsday predictors, saying that everything would fall apart come 01/01/2000, 12:00:00a.m. I had great confidence in the people working on the situation... t he only precaution I took was to withdraw $500 cash from my account on December 31. But I am very much aware that without the efforts that were put into preventing the rollover from being calamitous, Bad Things would have happened. As we've been told by the fearmongers, computers are everywhere. It took a lot of work to look everywhere (elevators, for instance, that use a 2-bit digit to keep track of the year of their last service date, that would thus stop working because no one gave them a once-over in the 19th century) and to catch just about all of the problems. Why are we blaming the computer people for creating a faux-crisis? They weren't the ones saying that we would go to Hell in a handbasket: they were the ones saying that it could be avoided. And that's just what they did. It was the media – the journalists looking for sensationalist headlines – that blew the possible downside out of proportion, and would have had us believe that such a fate was inevitable.

Let's not scorn the computer industry for their hard work in fixing mistakes of the past 25 years... instead, we should tip our hats to their industrious effort. We should thank them for the time they have sacrificed – many of them right up to, and through, New Year's eve – away from their families and friends. Many worked this hard knowing that come the year 2000, with everything working well, they would be out of a job (have you noticed the sharp drop-off in demand for Y2K experts?). Personally, I feel that whatever financial remuneration they have received is shallow recompense for the chain-reaction of human-induced computer error that they have managed to avert.

they went away...
they came back...
here are some pictures.

ECE in Ottawa!

good to know

It's Nominatin' Season!

by Heba Chehade

Wow, is it time already? Yes, it is time to nominate your fellow classmates for some awards. The following are the descriptions. Nominations will start Feb 1st 2000 and end Feb 21st 2000. Pick up forms from your club chairs, Fourth Year mailbox, or Eng Soc. If you have any further questions, please email leec@ecf.utoronto.ca

L. E. (Ted) Jones Award of Distinction
Established in 1997 by the Engineering Alumni Association, this award is to acknowledge the many Jones contributions to the University community and to endorse his appreciation of the arts, particularly music. Thus, this award is given to a graduating student who has demonstrated academic excellence and significant musical skill.

Skule Cannon Award
$100 is awarded to a member of the graduating class who has: a) Exhibited leadership and character during his/her four years; b) Served as an Executive member but not as an officer of the Society; c) achieved good academic standing

Class of 6T0 Award of Merit
A scholarship (amount dependent on the amount of interest generated since the investment of the endowment) awarded to an active member in first year who has: a) Exhibited leadership and character during his/her first year; b) Excelled academically

Qualifications: a) General School Activities; b) Contributions to the Eng Soc. Council; c) Social and Athletic Activities

Joe Club Award
This award is given to one person per department for their contributions to their club. This person is elected by each club. There are no strict guidelines and the recepient of the award does not have to be a member of the Club's executive.

Engineering Society Centennial Award
$100 is awarded to a first / second year student who: a) Exhibited leadership and character during his/her year; b) Served Eng Soc in some manner; c) Passes his/her year

Qualifications: a) General School Activities; b) Contributions to the Eng Soc. Council; c) Social and Athletic Activities

Engineering Society Semi-Centennial Award
$100 is awarded to a third year student who: a) Exhibited leadership and character during his/her year; b) Served Eng Soc in some manner; c) Passes his/her year

Qualifications: a) General School Activities; b) Contributions to the Eng Soc. Council; c) Social and Athletic Activities

Engineering Society Award
$100 is awarded to a member of the graduating class who has: a) Exhibited leadership and character during his/her four years; b) Served on Eng Soc during any of his/her four years; c) achieved good academic standing

Putting your Hubby/Honey Through Award (PHT)
This award is given to the spouse/common law partner of a graduating student who stood by them through the rough and tough times at Skule.

Thank you and good luck to all the nominees.

GRAD Events from 4th Year Club

by Heba Chehade

Hey Engineering GRADS of the *NEW* millennium...the following is a list of all the events taking place 'all for you to celebrate' the last semester of SKULE™ ! As for younger years, you are welcome to start getting ready for your turn...

January 28th: Party at The Tonic (117 Peter Street - Main intersection: Richmond & Peter). No cover and by-pass line B4 11pm $2.50 drinks. Just tell them you are from Engineering! (NB: no sneakers and no ripped jeans)
February 11th: Party at the Phoenix (410 Sherbourne Street). No cover B4 10:30pm and by-pass line all night. Pick up tickets the week of Feb. 7th from your Club Chairs, the Fourth Year Committee mailbox, or SUDS.
February 25th: 100 Hours till Iron Ring SUDS
March 1/2: Iron Ring Ceremonies
March 2: 'Bring back the Past and celebrate Iron Ring at The Brunswick House' (481 Bloor Street West — Main intersection: Bloor/Spadina). No cover B4 10pm and by-pass line. Pick up tickets the week of Feb. 28th from your Club Chairs or the Fourth Year Committee mailbox.
March 11: GradBall 0T0 (The first of the new millenium). Toronto Marriott Eaton Center. TIckets are sold Feb 21st— March 3rd from your Club Chairs or the basement of SF the week of Feb 28th (See ad in the Cannon for details)

SEE YOU ALL THERE!!!

Help the Homeless: Volunteer to help Out of the Cold Program

by Jean Cruz

The Out of the Cold Program has several centers in downtown Toronto that house and feed many of our neighbourhood homeless. These centers are always in need of volunteers, and have particular duties with timeslots that we can sign-up for. These timeslots are generally in the evening or early in the morning (more than enough time to shower and run to 9am lecture). If you're interested in helping out, email me at with your general availability (evenings and mornings free). Thanks!

GRADS: Win a Case of Champagne!

by Jean Cruz

By now, most grads will have received information about GRADitude from Yuval and myself, or from representatives from the different classes. GRADitude is the traditional final year pledge, started in engineering. Classes with 100% participation, as well as the class with the highest average pledge per person, will win a case of champagne courtesy of the Alumni Association. Your pledge cards are available from your club chairs or your GRADitude representatives, and are due on the 4th of February – lots of time to think about where you'd like your pledge to go. Remember: pledge amounts are not collected until a year from now.

I hope we give away 9 cases at Gradball!

GradBall 0T0

The first of the new millenium

Place: Toronto Marriott Eaton Center
Time: Dinner at 7 pm
Price: $55 - includes souvenir gift, dinner, drinks, and dancing
Tickets: On sale Feb 21st - March 3rd
Buy them from your club chairs or basement of SF the week of Feb 28th

$1 will go to a charity organization of your choice*

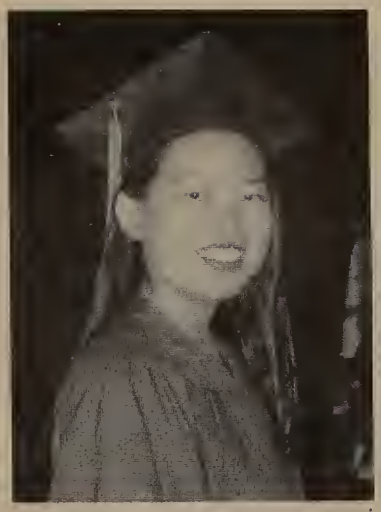
NSBE Celebrates Black History Month

by Neil Thompson

U of T's chapter of the National Society of Black Engineers (NSBE), founded here in Toronto a year ago, will have a visual presentation set up by the beginning of February in the Sandford Fleming building. Among other things, it will feature Black inventors and their inventions, ranging from the first practical light bulb to the ironing board. February is the official month for acknowledging the contributions that Blacks have made to the world. Accomplishments of civil rights leaders, such as Dr. Martin Luther King Jr., are well known, but a field that we usually do not associate with people of African ancestry is science and technology. Did you know that the first traffic signal was patented by a Black man? How about the lawn sprinkler, or gas mask?

One of the inventors that will be profiled is Elijah McCoy, a Canadian-born mechanical engineer that revolutionized the lubrication of steam engines. He made it possible for trains' engines to be oiled while they were still in motion; trains had to stop and be oiled manually prior to McCoy's breakthrough. His lubrication system in trains was so successful that it was modified for steamships and oceanliners as well. In fact, the saying, "the real McCoy," which guarantees quality, was coined by train inspectors who insisted that all trains have McCoy's lubricating machinery in them. McCoy secured over fifty patents during his lifetime, including ones for a folding ironing table and a lawn sprinkler.

NSBE U of T salutes such pioneers as Elijah McCoy, and hopes that the University of Toronto community can join NSBE members in learning more about such outstanding individuals. And once you are through with that, go back and study for another midterm. You can never learn too much.



Jessie Lei, EngSci 0T3

A Tribute to Jessie

BY JENNY HE

Reflecting upon this world of ours
In a manner that seems somewhat harsh, sudden and coarse
I see it with a light that
Due to its same revision and source

Projects an image that is somewhat dimmer
Lacking in a quality I find I cannot define.

Missing, now, something once within
But no longer, and sublime
Is the rage that I feel
Over the terrible, terrible, silent loss
Of all that was and will be remembered as Jessie.

— John Craig

During the early hours of January 1st, 2000, a beautiful heart stopped beating as Jessie Lei bid her adieus to this world. She was involved in a car accident that occurred on December 25th, while she and her family was on vacation in California. Her mother died at the scene. Jessie sustained severe injuries to her head, leaving her in a coma for a week, before she, too, passed away.

Jessie was born on the 31st of May in 1981, in the city of Wu Han, China. She spent the first fourteen years of her life there before moving to Canada in 1995. For three years she attended Vincent Massey Secondary School, and she graduated there as an Ontario Scholar in June of '99. She was an extraordinary student; she achieved outstanding grades in all of her courses, and was recognized nationally in the fields of computing, mathematics, and the sciences. Twice she represented Canada as part of the national math team which competed internationally. However, these many accomplishments that Jessie had attained had no bearing on her personality whatsoever. Jessie was a person, a human being with a soul, not unlike any of us. She was warm and loving, and she always wore a smile on her face. If you wanted to talk about anything, whether it was a personal problem, gossip, or even academics, she would have been glad to listen to you. If you seemed to be down, she would talk to you and try to make you cheer up and feel better. If you wanted to procrastinate, she'd join in on the procrastination. This wonderful personality of hers was one to be admired; she had a great sense of friendship, compassion, and anything else you could ever want in a person. She always succeeded in bringing a smile to your face. She was a true friend.

It is difficult to describe exactly how we feel right now, but I think Prof. Barbeau put it best with: "A rising sun too soon eclipsed, but still shining in the memories of those who had the privilege to know you".

What Is PEY?

BY JULIAN DUNN

Third or fourth year students can safely skip this introduction, because either you've already gone on PEY, or you are about to go and are currently interviewing for jobs, or you elected not to do PEY. In any case, you've already made up your mind about PEY, and presumably you knew the facts before doing so.

For the rest of you — PEY is the Professional Experience Year, an optional co-op program between second and third year, or third and fourth year. The idea is for you to gain some practical experience as a "real" engineer in industry, working with full-time engineering graduates. The single twelve or sixteen month term allows you to work on at least one project at the company, typically in its entirety. Going on PEY allows you to complete the 600-hour Practical Experience Requirement that you need before you can graduate from engineering

PEY - What Is It Like?

I started my PEY term in May 1999, working for Matrox Graphics Inc. as an ASIC Architecture and Validation Engineer. ASIC stands for Application Specific Integrated Circuit, which refers to chips that are dedicated towards a specific function. In our case, we make video ASICs (graphics controllers) such as the G400 chip that is currently our flagship product.

When I arrived, our office had been working on a new generation graphics chip for about two years. I basically arrived right in the middle of the development cycle, and had to pick up the knowledge very quickly. Because the validation group is very small — five people at present — we only have a "team leader", with whom I had an "architecture overview" meeting to introduce me to the chip. I was expected to figure out the details myself, so I spent a lot of time reading design specifications and background information, since I went into the job knowing next-to-nothing about video cards. Fortunately, the other two PEY students from the previous year were still around for a few more months, so they answered some of my questions and also did a lot of the work while I was learning.

Near the end of September there was a big push to get the chip finished and debugged, so everyone worked very hard to fix the bugs in the chip and implement any remaining features. I was responsible for generating the daily builds of the project and running regression simulations overnight. Naturally, as the frequency of module releases increased, so did my workload!

Unfortunately, near the end of October, management realized that the chip was far too big (in terms of silicon area) and could not be produced economically within the schedule. Thus, the project was reluctantly canceled. Of course, many people were devastated; they had spent the last two years of their lives working on a project that would not come to fruition. However, the positive aspects are that everyone now has two more years of design experience, and many of the mistakes that caused the project to continually slip its schedule would now be avoided in the future. One of those mistakes was not having complete and concise design specifications from the very start, which goes to show that without a good plan, it's difficult to do any useful work.

A new project was not long off, however, as head office almost immediately assigned us to a new, smaller project, which is a modification of a previously-completed project. In this way, the canceling of the other project was a blessing to me — I have the opportunity to work through most, if not all, the design cycle, as the project is scheduled to be completed by June. Since I started at the beginning of this project — going to spec review and making suggestions — I have a much better understanding of how the chip operates than I ever did with the old chip.

As far as my responsibilities go, they are roughly equal to any of the full-time employees in the architecture and validation group. Before I went on PEY, I was skeptical of such claims made by other PEY students, but now that I have experienced it firsthand; I know it is true. Since our group is small, the amount of overlap in knowledge amongst group members is correspondingly small, and it's not uncommon for me to be asked my advice or opinion about a particular module that is my specialty. (Unfortunately, one of my areas of specialty is writing microprocessor assembly code, something I'd rather avoid doing!)

On Job Hunting and Working In General

If PEY represents a small slice of full-time working life — which, as I've mentioned, I feel it does — then I suppose I am qualified to make some general observations on job hunting and working life in general.

First of all, just as with any job, make sure you know what you are getting into. I don't mean that in an ominous way, like "make sure you are not being hired by the mob", but just ensure that the job you are about to accept is right for you. Most companies, when they are interviewing you, will naturally be selling themselves, telling you how great the job is, and how happy they would be if you worked there. Make sure that you are going to be happy working there too! The job is only going to be great if you like it, and they are only going to be happy if you are happy. Find out what your job exactly is going to entail and ask yourself honestly if you are going to enjoy doing that, as opposed to "does it look good on paper." Plan a visit to the company if you can, just so you can meet the people and see if the work environment is something you would enjoy. This is especially important if you are moving to another city; ask yourself if you would be happy living there, and not just if you are happy visiting.

Above all, remember that money isn't everything. You may disagree with me now, but two years down the road, if you are making $70 000 or $80 000 a year but working at a demeaning Dilbert-type job, you will change your mind. As one of my old co-workers once said, "The ideal job is one that you would do even if you weren't paid for it." Reality might not be that extreme, but that quote is certainly food for thought.

My advice is particularly directed at those of you graduating in electrical or computer engineering. The job market is so ridiculously huge right now — while at Matrox, I have had no less than five recruiters call me, and I am only a co-op student! So, there is never any excuse for you to settle for a crummy job.

The Scoop

I hope that my experience has given you some idea what awaits you when you go on PEY, or when you graduate. I have learned a lot from being a PEY student, not only in regard to the increase in my technical ability, but I also have a better idea of what I would like to do after I graduate — what job I want, where I want to work, what kind of company I want to work for. For this reason, I recommend a carefully-chosen PEY job to anyone who is eligible — you'll find out what it means to be a "real" engineer, and having had that experience will help you greatly in choosing your career path.

E-Mail jdunn@aquezada.com for comments/questions.

Rockets, Medusa and Fine Art: The F!rosh Hard Hat Competition

by Gordon Lau

Ever since their induction to Skule, one of the first things they learned during F!rosh Week was that hardhats are the honour of engineers — protect it. (Well they also learned to sizzle like bacon on hot asphalt, but that is another story.) Those of us that succeeded in defending their hardhats from artsies' assaults have grand schemes for their glorification. Following in the footsteps of F!rosh Leaders, they were inspired to enter the Hardhat Decorating Competition for fame and fortune. On Tuesday Jan 11, 1900 hours, over two dozen F!rosh did just that — entering the SF atrium proudly wearing their prized possession. After presenting the judges with bribes (and more bribes), the contestants proceeded to meet each other in a relaxing exhibition catered by SUDS. The event drew the attention of bystanders who were curious as to the functionality of the creations and were met with eager demonstrations by their respective engineers. There were many wondrous designs present, it would appear that this year's F!rosh did not base their hardhats on what disciplines they are in, but rather treated the project as a form of personal expression. The tour-de-force of creativity was incredible, as show by the variety of themes — some were verifiable works of art, while others were more technologically inclined. For example, one hardhat (Mark Ford) featured a toy soldier rappelling down a model building in BFC style, powered by a windmill. Right beside it you see Dr. Seuss' Green Eggs and Ham (Shuba), along with another one (Andrew Overholt) sporting a rotating ERTW sign. Females tend to take the cute route like the kitty fur-lined hardhat (Gaaa... — *Ed.*) (Carrie Smith), while males favour a more avant-garde and menacing look (Thorsten Klaus) to their headgear. Of course, what would Godiva Week be without a hardhat with a naked Godiva mounting her steed (Keith Davies)? However, the contest was not without its unfortunate incidents. The BFC forcefully seized a hardhat from a F!rosh. The perpetrator is none other than the mysterious Mario Baker escorted by two of his Ministers. Beforethey vanish without a trace, they said to the victim: "There can be only one silver hardhat." John Rebello, the First Year Chair of Engineering Society also fell prey to robbery, it is believed that it is returned to the rightful owner — upon paying the ransom. Despite these events, the spirit amongst the contestants remained high. Following the ceremonial Beer Chugging and the Congo Dancing around the Atrium was the judging. The judges (winners from 1999 contest: Paul Graham, Adam Walker and Jenny Hartnel) went around, interviewed each contestant and examined their entries meticulously. Due to the fact thatsome design called for firing rockets, the show moved outside into the cold. Unfortunately, all engines failed to ignite electrically and repeated efforts to correct for it were in vain. It was speculated that the cold weather affected the fuses, as even a lantern battery could not launch the pyrotechnics. The moment of truth finally arrived, and all contestants were rewarded for their efforts (and bribes) with lavish prizes ranging from Skule patches and LGMB CD compilations to T-shirts, beer and beer glasses. The winners of the Hardhat Decorating Competition 2000 are: Third Place went to Matt Parker (EngSci). Second Place went to Evelyn Ng (Comp) and First Place went to Gordon Lau (EngSci). A more detailed analysis of their hardhats can be found on this page. Not only was the Competition fun for us, but it also adds to Godiva Week by motivating F!rosh to decorate their hardhats for future Bnad events and Orientation Weeks, according to Graham. He is also pleased at the increased number of entries this year and their high quality. (The Cannon would like to thank the Blue and Gold Committee and would like to extend our congratulations to all participants of this event!)

U of T Jacket Day

Hosted by the University of Toronto Engineering Society.
Share in the savings as it hosts its final Jacket Day for the academic year!

Conducted by DEMAE - Imagewear that fits

Find us at the Engineering Stores, SF Atrium
Tuesday, February 8, 2000 — 11:00AM-3:00PM
Wednesday, February 9, 2000 — 11:00AM-3:00PM

Save up to $50.00 on selected custom-ordered U of T leather, melton & melton/leather jackets!
On-campus, manufacturer's customer-direct servicing!

Extensive custom-fitting servicing options available to ensure desired fit!
New jacket styles & designs on display!

Innovative custom-graphic application services!
(develop your own U of T graphics or choose from a collection of new designs)

Brand new Faculty of Engineering & Faculty of Medicine Crests available!

Only $200.00 deposit required at the point of sale to initiate custom order

VISA, DIRECT PAYMENT, or CASH accepted

And the Hardhat Contest Winners Say...

Third Place: Matt Parker (EngSci F!rosh)

Hardhat's Designation: (none)

Design Philosophy/Special Features: "My design philosophy involved slapping some paint onto the hard hat and spraying some weather-proofing spray on top to protect it."

Construction Cost: $0 - "The paint, brushes, and sprays were all borrowed."

Bribe Philosophy: "The important thing about the bribes was finding out what the judges did and didn't want. Then, you just had to get it for them."

Bribes and Cost: "For Adam - Wendy's spicy chicken combo, Paul - Beer, Jen - Kahlua.. All said, it cost me about $30"

Advice for 0T4's: "Bribe. My vote is definitely for sale (and I'd like to get enough bribes to make back my spending this year) :)"

Reviewer's Comments: Third place traditionally belongs to the best briber I suppose you could see this as a good long-term investment. So the depth of his wallet compensated where he lacked in effort, but at least it matches his jacket and he weatherproofed it.

Second Place: Evelyn Ng (Comp F!rosh)

Hardhat's Designation: THE EVIL "See you in hell" MEDUSA

Design Philosophy/Special Features: "No malfunctioning rocket launcher."

Construction Cost: $22 - " paper $10...glue $5...paint $7...getting screwed over from first place...priceless."

Bribe Philosophy: See answer below.

Bribes and Cost: "I tried to sell EngScis (you) to the judge's as sex slaves but they passed up the offer, no action for you Gordo."

Advice for 0T4's: "If you have a rocket launcher: make sure you can get it up I should've known an EngSci wouldn't be able to get it up when it counts '10, 9, 8, ...,3, 2, 1, Oops.'"

Reviewer's Comments: A lady with a scorned tongue and a hardhat to match. But in all fairness it is truly a work of art, the details on the entwining snakes should really be viewed up close - she did not spare any effort in making them lifelike. And Evelyn, concerning the problem with my rocket why don't you wear your hardhat the next time I see you? I am sure any man will be "rock hard".

* In the email interview she told me not to take it TOO seriously, so neither should you, the reader.

First Place: Gordon Lau (EngSci F!rosh)

Hardhat's Designation: Tactical Hardhat Unit

Design Philosophy/Special Features: The name says it all, with all the equipment you need for a BFC assault: A built-in walkie-talkie with headphones, a ventilation fan, flasb bulbs to stun a room of people and a rocket to blast them away. It is all controlled via a panel I tie around my left arm and I have special materials to protect me from the blast.

Construction Cost: $100 "Fan - $10, Walkie Talkie - $10, Headset w/ mic - $10, Flash bulbs - $5, Batteries - $10, Rocket & Accessories - $30, Electronics (buttons, LEDs, wires) - $30"

Bribe Philosophy: When you had spent so much on materials already, just bribe the judges modestly to show them respect.

Bribes and Cost: 4 bottles of Honey Brown, but they cost me nothing as I won 24 of them back at another SUDS design contest.

Advice for 0T4's: When you get a vision of what your hardhat will be, realize it at all costs. It may take up some of your Christmas holiday and a wad of cash but for a dream come true — well, as Evelyn says — it's priceless. Also, try to get you materials from Active before you leave for the break and remember to melt plastics and solder in a well-ventilated area. (ie. NOT in the basement.)

CONGRATULATIONS!

The Cannon is proud to present the recipients of Faculty of Applied Science and Engineering In-Course Scholarships
(based upon academic study in the 1998-1999 Session)

FIRST YEAR:
Andrew Alexander Kinghorn Scholarships: Ashish Macwan (Mechanical Engineering), Wei Hong (Engineering Science), Jinsong Liu (Civil Engineering); **Anthony A. Brait Scholarship:** Panayiotis Peter Psiachos (Engineering Science); **ASM International (Ontario Chapter) Scholarships:** Noorpret Somal (Materials Engineering); **Baptie Scholarship:** Surji Fu (Electrical Engineering); **Charles A. Lowry Prize:** Jovan Nedeljkovic (Electrical Engineering); **Chemical Engineering & Applied Chemistry Alumni Entrance Scholarships:** Sarah Attia (Chemical Engineering), Amy Ng (Chemical Engineering), Laura Man Yee Yu (Chemical Engineering), Elissa Schamann (Chemical Engineering), Kevin Ko (Chemical Engineering), Miranda Cheung (Chemical Engineering), Narjis Ali (Chemical Engineering); **Class of 4T3 Scholarships:** Kushal Sayeed Munir (Computer Engineering); **Denis Flynn Memorial Scholarship:** Kit Ying Catherine Chan (Civil Engineering); **Donald Ross Leadership Award:** Laura Man Yee Yu (Chemical Engineering); **Duncan R. Derry Scholarship:** Agnes Krawcyk (Mineral Engineering); **Edward and Helen Swanston Scholarship:** Gloria Cheng (Chemical Engineering); **ECE Alumni Scholarship:** Elie Chamieh (Computer Engineering); **Engineering Alumni Centennial Admission Scholarship:** Kit Ying Catherine Chan (Civil Engineering), Ka Cheng (Engineering Science), Neil Wadehra (Engineering Science); **Engineering Class Of 5T6 Merit Award:** Paul Graham (Mechanical Engineering); **Faculty of Applied Science and Engineering Admission Scholarship:** Ka Tsun Peter Cheng (Engineering Science), Ashish Jagadish Khisti (Engineering Science), Neil Wadehra (Engineering Science), Michael Jammer (Chemical Engineering); **General Motors Women In Electrical & Mechanical Engineering:** Peggy Fong (Electrical Engineering), Amanda Chung-Tan Wing (Electrical Engineering), Bonnie Hau-Yee Yeung (Electrical Engineering), Catherine Hancharek (Mechanical Engineering), Faye Lee (Mechanical Engineering); **Giorgi Cefis Memorial Scholarships:** Arzhang Beheshti (Civil Engineering); **J. Frank Guenther Scholarship:** Ashish Jagadish Khisti (Engineering Science); **J.P. Bickell Foundation Scholarships:** Badi Uz Zaman(Chemical Engineering), Gloria Wing Tak Cheng (Chemical Engineering); **James A. Peers Scholarship In Industrial Engineering:** Yuan Xiang Jason Yu (Industrial Engineering); **Jane Elizabeth Ham Memorial Scholarship:** Peter Johnathon Gero (Engineering Science); **John M. Empey Scholarship:** Kushal Sayeed Munir (Computer Engineering); **Lassonde Scholarships:** Shawn Holloway (Mineral Engineering), Adam Horowitz (Mineral Engineering); **Lau Family Scholarships:** Gopikrishna Srinivasan (Computer Engineering), Lun Hing Alan Lam (Electrical Engineering); **Leon J. Rubin Scholarships:** Sarah Attia (Chemical Engineering), Miranda Cheung (Chemical Engineering), Piyanka Dilawari (Chemical Engineering), Sumaiya Mahbub (Chemical Engineering), Wing Lun Dalton Chan (Chemical Engineering); **MacLennon MacLeod Memorial Prize:** Ashish Jagadish Khisti (Engineering Science); **Ontario Power Generation Award:** Kristen Hsu-Hwa Chang (Computer Engineering); **Paulin Memorial Scholarship:** Anthony Bing-Yan Chan (Engineering Science); **PEO Scholarship:** Yin Wei Ter (Electrical Engineering), Lun Hing Alan Lam (Electrical Engineering); **Ransom Scholarship:** Shaily Sanghvi (Chemical Engineering); **Reginald J. Redrupp Award:** Kevin Cirulis (Mineral Engineering), Natasha Vaz (Mineral Engineering); **SNC-Lavalin Scholarship:** Noorpreet Somal (Materials Engineering); **Stelco Undergraduate Scholarships:** Hans Christian Fischer(Materials Engineering), Malcolm Jussawalla (Materials Engineering); **Sullivan Memorial Scholarship:** Amy Kit Chi Chan (Engineering Science); **University of Toronto Scholar:** Shu Liang (Computer Engineering), Gopikrishna Srinivasan (Computer Engineering), Alex Chow (Electrical Engineering) Carl Nehme (Electrical Engineering), Clarence Sai-Bong Cheng (Engineering Science), Panayiotis Peter Psiachos (Engineering Science), Adam Tenenbaum (Engineering Science), Timothy Michael Vanderhoek (Engineering Science), Amy Kit Chi Chan (Engineering Science), Bertram Leesti (Engineering Science), Yu-Chih Tseng (Electrical Engineering), Kwang Yong Lim (Mechanical Engineering); **University Of Toronto Women's Association Scholarship:** Siu Ning Sunny Leung (Engineering Science); **Wallberg Undergraduate Scholarships:** James Fingas (Engineering Science), Christine Wong (Engineering Science), Stephanie Pereira (Engineering Science), Joyce Kai See Poon (Engineering Science)

SECOND YEAR:
5T6 Civils Scholarships: Sin Teck Ng (Civil Engineering); **Andrew Alexander Kinghorn Scholarships:** Sarah Kim (Industrial Engineering), Kushal Galati, (Chemical Engineering); **Anthony A. Haasz Scholarship:** Simon J. Gorka (Engineering Science); **Ardagh Scholarship:** Tommy Ngai (Chemical Engineering); **ASM International (Ontario Chapter) Scholarships:** Chrystia Wynnyckyj (Materials Engineering); **Blake H. Goodings Memorial Award:** Felix K. Wong (Mechanical Engineering); **C. William Daniel Leadership Awards:** Anil Joshi (Mechanical Engineering); **Charles Gordon Manning Prize:** Diana Bernales (Chemical Engineering); **Dharma Master Chuk Mor Scholarship:** Jason Leslie Ing (Industrial Engineering); **Duncan R. Derry Scholarship:** Samuel J. Quansah (Mineral Engineering); **Electrical & Computer Engineering Admissions Scholarship:** Anna Wong (Electrical Engineering), Vladislav Alexandrov (Computer Engineering), Hamza Karamali (Computer Engineering), Mark Bourgeault (Computer Engineering); **Engineering Alumni Centennial Scholarship (Honorarium):** Jill Chua (Computer Engineering), Gillian Hillel (Engineering Science), Aaron Kratt (Engineering Science), Michael Krejcik (Computer Engineering); **Engineering Society Award:** Peggy Jiunn Yann Linn (Mechanical Engineering), Christopher George Davis (Computer Engineering); **Ford Electronics Scholarship:** Eric Wu (Electrical Engineering); **Frankie Kwok Memorial Scholarship:** Dusan Pjevac (Mechanical Engineering); **George A. Guess Scholarships:** Celeste Merey (Materials Engineering); **General Motors Environmental Engineering Awards:** Sumita Makol (Chemical Engineering), Devon Hayward (Civil Engineering), Helen Li (Chemical Engineering); **General Motors Women In Electrical & Mechanical Engineering:** Samira Naraghi (Electrical Engineering), Yuen-Ming Karen Kwong (Electrical Engineering), Narmadha Vijayakumar (Electrical Engineering), Marie Grace Li (Industrial Engineering), Harminder Grewal (Mechanical Engineering) ; **Halsall Scholarships In Building Engineering:** Tony Chan (Civil Engineering); **Harvey Aggett Memorial Scholarship:** Jason Ing (Industrial Engineering); **Hebert Gladish Memorial Scholarship:** De Xu Lin (Engineering Science); **J.A. Findley Scholarship:** Anil Joshi (Mechanical Engineering); **J.P. Bickell Foundation Scholarships:** Nilima Gandhi (Chemical Engineering), Lisa Marie Allegro (Chemical Engineering), Michael Angeli (Chemical Engineering), Adrienne Lovink (Chemical Engineering); **James L. Morris Memorial Prize:** Yoon Peng Tan (Civil Engineering); John M. Empey Scholarship: Stephen Jehlicka (Mechanical Engineering); **Johnson's Wax Scholarship:** Yeow Keong Lim (Chemical Engineering); **Kenneth Ward Smith Scholarships:** Steven Chan (Engineering Science), Aaron Kran (Engineering Science); **Lassonde Scholarships:** Katarzyna Maria Plachta (Mineral Engineering), Gurpreet Purhar (Mineral Engineering), Keshav Chari (Mineral Engineering); **Maurice Stren Memorial Scholarship:** Mark Rabo (Mechanical Engineering); PEO Scholarship: Lisa Marie Allegro (Chemical Engineering), Tzvi Goldman (Engineering Science); **Peter K. Strangeway Scholarship:** Jan Otto Negrini (Materials Engineering); **Peter L. Munro Memorial Scholarship:** Nellaine Matthews (Mineral Engineering); **Peter Sands Award In Engineering Science:** Michael Templeton (Engineering Science); **Robert M. Smith Scholarship:** Christian Amizola (Mineral Engineering); **Shell Canada Limited:**Diana Bernales (Chemical Engineering), Nilima Gandhi (Chemical Engineering), David Forshtendiker (Industrial Engineering), Jakub Wronski (Mechanical Engineering), James Brown; **Stavros Leventis Award:** Marcus Lam (Electrical Engineering); **Stelco Undergraduate Scholarships:** Bryan Gillmeister (Materials Engineering), Trevor Franken (Materials Engineering); **University Of Toronto Scholar:** Naana Afua Jumah (Chemical Engineering), Borys Bradel (Computer Engineering), Michael Siu Yue Wong (Engineering Science), David Shellah Forshtendiker (Industrial Engineering), Karen M. Caputo (Industrial Engineering), Sarah Kim (Industrial Engineering), Leonard Kofman (Industrial Engineering), Jacqueline D. Bell (Industrial Engineering),Wai-Lyn Wong (Mechanical Engineering), Jakub Wronski (Mechanical Engineering), Ramsey Michael Ray Tabbara (Mechanical Engineering),Chye Meng Yong (Mechanical Engineering); **Wallberg Undergraduate Scholarship:** Ryan Fung (Engineering Science), Helen Li (Chemical Engineering); **William R. Worthington:** Joseph Robert Aquino (Civil Engineering)

THIRD YEAR:
Alliedsignal Canada Inc. Scholarships of Excellence: Andrew Brzezinski (Electrical Engineering), Benham Mohammadi (Electrical Engineering); **Andrew Alexander Kinghorn Scholarships:** Lei Xu (Computer Engineering), Hoi-Fai Alfred Leung(Electrical Engineering); **ASM International (Ontario Chapter) Scholarships:** Yannic Praden (Materials Engineering); **Ben Bernholtz Memorial Scholarship In Operational Research:** Cheung-Ki Derek Siu (Industrial Engineering); **C. William Daniel Leadership Awards:** Anna Edwards (Computer Engineering); **Canadian Society For Ichemical Engineering Medal:** Terrence C.H. Woods (Chemical Engineering); **Canadian Society For Industrial Engineering Toronto Chapter:** Alicia Pinksen (Industrial Engineering); **Canadian Society For Mechanical Engineering T Christie Arnold Scholarship:** Marta

Guardado-Redondo (Industrial Engineering); **Charles Edwin Trim Scholarship**: Joseph Yau (Electrical Engineering); **Chemical Institute of Canada Prize (Toronto Section)**: Jan Winther Lutzen (Chemical Engineering); **Chester B. Hamilton Scholarship**: Kamalatharshan Kamalanathan (Mechanical Engineering); **Class of 3T7 Scholarships**: Keyvan Mohajer (Engineering Science); **Constant Temperature Control Limited Scholarships**: Keyvan Mohajer (Engineering Science), David Cashman (Engineering Science); **Delcan Scholarship In Civil Engineering**: John Ng (Civil Engineering); **Dietmar Koslowski Memorial Bursary In Electrical Engineering**: Raghida El-Samrout (Electrical Engineering), Hardik Patel (Electrical Engineering); **Dow Chemical Canada Inc. Award**: Melanie Duhamel (Chemical Engineering); **Earl Charles Lyons Memorial Award**: Helen Maria Saoulli (Mechanical Engineering); **F.C.C.P. - John Hin Chung Tsang Memorial Scholarship**: Andrew Brzezinski (Electrical Engineering); **Halsall Scholarships In Building Engineering**: Ryan D. Cuddy (Civil Engineering); **General Motors Environmental Engineering Awards**: Jeremy Thomas Kraemer (Engineering Science), Steven Smyth (Mechanical Engineering), Emma Fong Ying Ng (Chemical Engineering), Leonard Karl Eberhard (Civil Engineering); **General Motors Women In Electrical & Mechanical Engineering**: Piony Wai Chun Yeung (Electrical Engineering), Muna Safi-Harab (Electrical Engineering), Min Yvonne Lin (Electrical Engineering), Winnie Ying Pei Ho (Mechanical Engineering), Linda Chang (Mechanical Engineering); **George A. Guess Scholarships**: Chun Kai Hsiao (Materials Engineering), Dushan Batrovic (Materials Engineering), Yi Fong Chiang (Materials Engineering), Muhammed Adnan Yousuf(Materials Engineering); **Gordon F. Tracy Scholarship**: Akos Toth (Electrical Engineering); **Gordon R. Sleon Scholarship**: Richard Wah-Ching Fung (Electrical Engineering); **Greater Toronto Sewer and Watermain Contractors Association Award In Civil Engineering**: Manson Fung (Civil Engineering); **IEEE Canada-Toronto Section**: Douglas Kim Wan Ko (Electrical Engineering); **J.A. Findley Scholarship**: Brian Peter Standing (Mechanical Engineering); **J.P. Bickell Foundation Scholarships**: Ruihao Ma (Engineering Science); **James D. Todd Memorial Scholarship**: Yu Chun Lam (Mechanical Engineering); **James Franceschini Foundation**: Tse Luen Lee (Civil Engineering); **James W. H. Grattan Tyrrell Memorial Scholarship In Civil Engineering**: Walter John Gordon Bayless (Civil Engineering); **John M. Empey Scholarship**: Kai Yin Kevin Leung (Mechanical Engineering); **John Hamilton Parkin Scholarship**: Vedran Miletic(Engineering Science); **Johnson's Wax Scholarship**: Pedro Vieira (Chemical Engineering); **Kenneth A. Selby Scholarship In Construction Engineering In Department of Civil Engineering**: Stephan A. Rouatt (Civil Engineering); **Lassonde Scholarships**: Benjamin Thomas Whitney (Mineral Engineering), Peter Calder (Mineral Engineering), Daniel James Rolph (Mineral Engineering), William K. Tai (Mineral Engineering); **Lisa Anne Hamann Memorial Award**: Susanne Given (Mechanical Engineering); **Lloyd George Webber Memorial Scholarship**: Janet Hoi Shan Ma(Chemical Engineering); **Marshall Macklin Monaghan Scholarship**: Manson Fung (Civil Engineering); **Mcnaughton Scholarship**: Gregory Kunyavsky (Computer Engineering); **Murray F. Southcote Scholarship**: Stanislav Sokorac (Computer Engineering); **Norman E. Byrne Award**: Harmony J. Smith (Mechanical Engineering); **Paul Cadario Scholarship**: Jennifer Ip (Civil Engineering); **PEO Scholarship**: Dennis Keok Luen Ma (Computer Engineering), Michael Lapkei Tam (Mechanical Engineering); **Peter L. Munro Memorial Scholarship**: Nadine Miller (Mineral Engineering); **Philip H. Jones Scholarship**: Kinan Rai (Civil Engineering); **Richard Rowland memorial Scholarship**: Darryl Metcalfe(Mechanical Engineering); **Robert M. Smith Scholarship**: Raffy Turla (Mineral Engineering), Laila Sedore (Mineral Engineering); **Ronald Paul Manning Scholarships**: Benham Mohammadi (Electrical Engineering); **Ross L. Clark Memorial Scholarship**: Kum Chee Choo (Civil Engineering); **Samar Mutlak Memorial Award**: Yaron Daniel Derman (Industrial Engineering); **Shell Canada Limited**: Rafael Moles (Mechanical Engineering), Lorraine Lam (Industrial Engineering), Joyce Lai Shan Tang (Chemical Engineering), Cassandra Lee (Chemical Engineering), Andreas Kourememos (Mineral Engineering), William K. Tai (Mineral Engineering); **Sydney C. Cooper Scholarships**: Nathaniel S. Hung (Civil Engineering); **Sydney George Harris Bursary**: Paul Leventis (Engineering Science); **Trentwith and Galipeau Aerospace Sciences Award**: James Colaco (Engineering Science); **University Of Toronto Scholar**: Elisabeth Anne Gilmore (Chemical Engineering), Kevin Christopher Clarke (Civil Engineering), Steven M. Aquino (Civil Engineering), Yoav Weinberg (Computer Engineering), Raypal Grewal (Engineering Science), Ketan Padalia (Engineering Science), Seyed Majid Emami (Engineering Science), Sonya Cristina Maligec (Industrial Engineering), Brian Peter Standing (Mechanical Engineering), James Trevor John Williams (Mechanical Engineering), David Hum (Engineering Science), Lei Xu (Computer Engineering); **Vern Gomes Memorial Award**: Marin Shivanthini Thambinayagam (Electrical Engineering); **Wallberg Undergraduate Scholarship**: Navneet Mehta (Computer Engineering), Ta Fu Dave Kuo (Chemical Engineering); **William Berard Silverston Scholarship**: Danny DaSilva (Mechanical Engineering); **William Ian Mackenzie Turner Scholarship In Endustrial Engineering**: Ai Fuong Ellen Trinh (Industrial Engineering); **William V. Hull Scholarship**: Jordan Shapiro (Engineering Science)

FOURTH YEAR:

Professional Engineers Gold Medal: Daniel Levner (Engineering Science); **Henry G. Acres Medal**: Giovanni Distefano (Mechanical Engineering); **W.S. Wilson Medals**: Anya-Liisa Bobert (Civil Engineering), Jacob James Hanley (Lassonde Mineral Engineering), Giovanni Distefano (Mechanical Engineering), Alexander Steven Ross (Industrial Engineering), Danield Levner (Engineering Science), Choy Siong Wu (Chemical Engineering), Elias Louie Pylarinos (Electrical Engineering), Adrian Sanchez (Materials Engineering), Luigi Di Fabio (Computer Engineering); **Otto Holden Scholarship**: Giovanni Distefano (Mechanical Engineering); **Barbara Zdasiuk Memorial Scholarship**: Daniel Levner (Engineering Science); **F.C.C.P. - John Hin Chung Tsang Memorial Scholarship**: Elias Louie Pylarinos (Electrical Engineering); **G.W. Ross Dowkes Memorial Prize**: Joshua John Ince (Chemical Engineering); **J.E. Reid Memorial Prize**: Elias Louie Pylarinos (Electrical Engineering); **The Irving Krausmintz Award**: Ada Tak-Wai Au (Engineering Science); **Mackay Hewer Memorial Prize**: Lawrence Yan Fai Yi (Chemical Engineering); **A.B. Platt Award**: Rebecca Hau-Yee Wu (Mechanical Engineering); **"Ontario Chapter, American Concrete Institute Award"**: Michelle Renee Nokken (Civil Engineering); **Society of Chemical Industry Merit Award**: Choy Siong Wu (Chemical Engineering); **CSME Medal**: Michael Isaac Barak Chai (Mechanical Engineering); **Wallace G. Chalmers Design Award**: Gita Agnes Romana Anselm (Mechanical Engineering) and Diana Katherine Roller (Co-authors)(Mechanical Engineering); **Centennial Thesis Award**: Michelle Renee Nokken (Civil Engineering), Teresa Su Yang Huang (Lassonde Mineral Engineering), Joanne P. Farrington (Mechanical Engineering), Carl Charles Woo (Industrial Engineering) and Stephen Hung (Co-authors) (Industrial Engineering), Ada Tak-Wai Au (Engineering Science), Alireza Khademhosseini (Chemical Engineering), Gurdeep Singh Baweja (Electrical Engineering) and Jeremy Mithiran Edwards (Electrical Engineering) (Co-authors), Geraldine Santos (Materials Engineering), Zhao Ping Tang and Chuan Zhang (Co-authors) (Computer Engineering); **Class of 3T5 Second Mile Engineer Award**: Steve Patrick Dennis (Civil Engineering); **Robert F. Moore Thesis Award**: Joseph Y. Kim and Wendy Elizabeth Lee (Co-authors)(Industrial Engineering); **"Toronto Section, National Association of Corrosion Engineers (NACE)"**: Ying Kit Gary Lok (Chemical Engineering); **Dr. Arthur Herrmann Memorial Award**: Ryan Che-Chiu Yu (Mechanical Engineering); **"Canadian Society for Civil Engineers, Ontario Region Building Science Award"**: Anya-Liisa Bobert (Civil Engineering), Steve Patrick Dennis (Civil Engineering); **Marjorie Hilda Merrick Turner Award**: Ronodev Sinha(Computer Engineering); **The Elsei Gregory MacGill Memorial Scholarship**: Mirjam Francisca Vanderkamp (Lassonde Mineral Engineering)

CONGRATULATIONS are also in order for these men and women of Skule™

Faculty of Applied Science and Engineering Admission Scholarships
1998-99 Academic Year

Donald Ross Leadership Award: Winnett, Sean Patrick (Chemical Engineering); **DaVinci Scholarship**: Abbas, Nazar (Computer Engineering), Barzin, Bahardoust (Engineering Science), Chan, Wing Hang Jackie (Computer Engineering), Chen, Wen Chen (Engineering Science), Cheung, Man Chung M.(Engineering Science), Chui, Jimmy Chi-Wai (Engineering Science), Huang, Samuel Tien-Chie (Engineering Science), Lei, Jessica Yin (Engineering Science), Lessard-Dewhirst, Laurent (Engineering Science), Mok, Alvin (Engineering Science), Nguyen, Phillip Tu (Computer Engineering), Sibony, Elie (Electrical Engineering); **Robert M. Friedland Scholarship**: Devanesan, Gratuz (Lassonde Mineral Eng.), Leonardi, Maria Rosa (Lassonde Mineral Eng.); **Wallberg Foundation Admission Scholarship**: Chan King Ch, Nathalie C. (Engineering Science), Chan, Yan Kiu (Engineering Science), Chen, Chih Tung (Computer Engineering), Cheung, Man Chung M. (Engineering Science), Cheung, Wendy Wai Yin (Engineering Science), Cilio, Adam J. (Engineering Science), Daly, Denis Clarke (Engineering Science), Dolgin, Elie (Engineering Science), Fakhri, Payam (Computer Engineering); **Civil Engineering Admission Scholarship**: Duong, Kien Vinh (Civil Engineering), Lau, Wing Yee Venessa (Civil Engineering), Loftus, Jason (Civil Engineering), Robbins, Michael Edward (Civil Engineering); **Metro Toronto Road Builders Assoications Adm. Scholarship**: Ng, Chi Fung (Civil Engineering); **Roy Jarvis Henry Scholarship**: Lessard-Dewh, Laurent A. (Engineering Science), Lo, Edward (Engineering Science); **Harvey W. Kriss Admission Scholarship**:

Gentile, Angelo (Industrial Engineering); **John Wolfe McColl Memorial Award:** Lu, Xiao Li (Computer Engineering); **James Gow Admission Scholarship:** Grossman, Adam D. (Engineering Science); **Lachlan Dales McKellar Admission Scholarship:** Luh, Jeanne (Chemical Engineering), Lui, Raymond (Electrical Engineering); **The Lau Family Scholarship:** Mok, Julie Yin Ling (Electrical Engineering), Nguyen, Phillip Tu (Computer Engineering); **Hal Major Memorial Admission Scholarship:** Wang, Zhi Nancy (Civil Engineering); **George A. Guess Scholarship:** Leung, Albert Koon-Yiu (Materials Engineering); **Mechanical & Industrial Engineering Admission Scholarship:** Batista, Bryan Edgar (Mechanical Engineering), Bregman, Bram David (Industrial Engineering), Fiumara, Francesca (Industrial Engineering), Gentile, Angelo (Industrial Engineering), Giallonardo, Rino (Mechanical Engineering), Pabani, Karim (Industrial Engineering), Rebello, John L (Mechanical Engineering), Ricci, Patricia (Industrial Engineering), Ritchie, Connor (Mechanical Engineering), Stubbs, Lillian Elizabeth (Industrial Engineering); **W.J.T. Wright Admission Scholarship:** Jacques, Daniel (Civil Engineering); **Motorola Foundation Scholarship:** Alexander, Susan (Electrical Engineering), Dharamdial, Natasha R. (Electrical Engineering); **James Turner MacBain Scholarship:** Lei, Jessica Yin (Engineering Science); **Bi-Cultural Admission Scholarship:** Hon, Marcia Young (Computer Engineering); **Metallurgy & Materials Science Alumni Admission Scholarship:** Collantes, Don Chito (Materials Engineering), Ng, Evelyn K. (Materials Engineering); **Chemical Engineering & Applied Chemistry Alumni Entrance Scholarship:** Chan, Son Hang Paul (Chemical Engineering), Chang, Tso Fu Mark (Chemical Engineering), Chow, Alison (Chemical Engineering), Fawcett, Heather (Chemical Engineering), Kwong, Wing Kan Kathryn (Chemical Engineering), Lee, Lorraine Kwok Gee (Chemical Engineering), Luck, Anni (Chemical Engineering), Moss, Edward Bram (Chemical Engineering), Muasher, Muna (Chemical Engineering), Peto, Jennifer (Chemical Engineering), Wen, Alan C. (Chemical Engineering); **Osotf - Faculty of Applied Science & Engineering Admission Scholarship:** Alexander, Susan (Electrical Engineering), Andreeva, Elena Olegovna (Engineering Science), Annett, Chad (Engineering Science), Booth, Christine K (Materials Engineering), Bouwhuis, Brandon (Engineering Science), Calinescu, Andrei (Mechanical Engineering), Chan, Eric Chi Wing (Computer Engineering), Chan, Linda Karming (Engineering Science), Cheung, Jonathan (Electrical Engineering), Cho, Ben (Engineering Science), Chow, Alison (Chemical Engineering), Davy, Gideon (Engineering Science), Dharamdial, Natasha R. (Electrical Engineering), Ding, Mingyao (Engineering Science), Fernandes, Audrey (Chemical Engineering), Ho, Pauline (Electrical Engineering), Holmes, Christina (Engineering Science), Javed, Taimur (Computer Engineering), Johnson, Luke Kristopher (Engineering Science), Lam , Andrew (Engineering Science), Lee, Francine (Industrial Engineering), Leung, Tracy (Chemical Engineering), Mai, Trung Duong (Electrical Engineering), Marczewski, Jaroslaw (Computer Engineering), Mavandadi, Sam (Engineering Science), Mehta, Puja (Computer Engineering), Moritz, Robin (Engineering Science), Nguyen, Le Ngoc Mai (Engineering Science), Nicolescu, Julia Christina (Engineering Science), Pharasi, Siddharth (Engineering Science), Priest, Lee Clarke (Mechanical Engineering), Rebello, John L (Mechanical Engineering), Robbins, Michael Edward (Civil Engineering), So, Ting Fung (Engineering Science), Sutherland, Kyla Lynne S. (Engineering Science), Tchao, Danielle (Engineering Science), Wang, Vivian Zi Wei (Chemical Engineering), Wang, Zhi Nancy (Civil Engineering), Wronski, Tomasz (Computer Engineering), Yiu, Carol C (Industrial Engineering), Zhu, Tommy (Computer Engineering); **Murray Calder Hendry Scholarship:** Al Halabi, Abdul Hamid (Computer Engineering); **Henry C. Pun Memorial Scholarship:** Hauch, Kristopher Gordon (Computer Engineering); **Grabill Admission Scholarship:** Angelo, Chelanghara M. (Chemical Engineering); **Jane Elizabeth Ham Memorial Scholarship:** Lei, Jessica Yin (Engineering Science); **osotf - Jane Elizabeth Ham Memorial Scholarship:** Nikkanen, Kathryn Esther (Engineering Science); **Edward A. Rolph Scholarship:** Klaus, Thorsten Peter (Engineering Science); **Leon Rubin Scholarship:** Fernandes, Audrey (Chemical Engineering), Padalia, Ravi (Chemical Engineering), Patel, Onil (Chemical Engineering), Tran, Julie Betty (Chemical Engineering); **Metro Toronto Sewer & Watermain Contractors Association Admission Scholarship:** Ng, Chi Fung (Civil Engineering); **Edward & Helen Swanston Scholarship:** Bai, Angela Ying Qian (Chemical Engineering); **Robert Sangster Memorial Admission Scholarship:** Ng, Man Loi (Engineering Science); **William I. Mackenzie Turner 2T5 Scholarship:** Nguyen, Duy Phuc (Computer Engineering); **Faculty of Applied Science & Engineering Admission Scholarship:** Abbas, Nazar (Computer Engineering), Al Halabi, Abdul Hamid (Computer Engineering), Angelo, Chelanghara M. (Chemical Engineering), Bradley, Stephanie Ann (Engineering Science), Bujak, Bojan (Materials Engineering), Butler, Mark James (Chemical Engineering), Chan King Ch, Nathalie C. (Engineering Science), Chan, Wing Hang Jackie (Computer Engineering), Chan, Yan Kiu (Engineering Science), Cheung, Man Chung M. (Engineering Science), Cheung, Wendy Wai Yin (Engineering Science), Chui, Jimmy Chi-Wai (Engineering Science), Cilio, Adam J. (Engineering Science), Daly, Denis Clarke (Engineering Science), Davies, Keith William (Engineering Science), Deak, David Sherwood (Engineering Science), Dolgin, Elie (Engineering Science), Dusatko, Tomas (Computer Engineering), Feng, Zhi Shun Chris (Engineering Science), Gallaugher, Matthew Peter (Engineering Science), Gao, Weiyue (Engineering Science), Gentile, Angelo (Industrial Engineering), Gliane, Richard Vincent (Engineering Science), Goldman, David Samuel (Computer Engineering), Good, Moses Leo (Engineering Science), Grossman, Adam D. (Engineering Science), He, Jia Yue (Engineering Science), Hsu, Huan-Husna Henry (Engineering Science), Huang, Samuel Tien-Chieh (Engineering Science), Khushrushahi, Shahriar R. (Mechanical Engineering), Klaus, Thorsten Peter (Engineering Science), Lam, Simon Sai-Ming (Engineering Science), Lau, Alan Pak Tao (Engineering Science), Lee, Daniel (Engineering Science), Lee, Edward Chin Wang (Engineering Science), Lessard-Dewh, Laurent A. (Engineering Science), Lui, Raymond (Electrical Engineering), Lui, Vicki Wai-Shum (Engineering Science), MacKenzie, Matthew G. (Engineering Science), Mar, Christopher A. (Engineering Science), Mok, Alvin Ho Kwan (Engineering Science), Mok, Julie Yin Ling (Electrical Engineering), Mukerji, Meghana (Engineering Science), Nanduri, Devyani (Engineering Science), Ng, Chi Fung (Civil Engineering), Ng, Man Loi (Engineering Science), Nguyen, Duy Phuc (Computer Engineering), Novak, Elizabeth Marie (Engineering Science), Oraha, Evan (Engineering Science), Pal, Diana Sheau-Wei (Engineering Science), Parker, Matthew J. (Engineering Science), Parsons, Michelle Dawn (Engineering Science), Ravindran, Vikram (Engineering Science), Roszak, Bartek (Engineering Science), Seeto, Henry Chung (Engineering Science), Siu, Leonard Yau-Kit (Engineering Science), Sung, Yu-Wei (Electrical Engineering), Sze, Vivienne (Electrical Engineering), Tsui, Sheung Yuen, Amy (Civil Engineering), Varodayan, David Prakash (Computer Engineering), Walker, Jennifer (Engineering Science), Warkentin, Jonathan Luc (Engineering Science), Whiting, Emily Jing Wei (Engineering Science), Winter, Jonathan Aaron (Engineering Science), Wong, Thomas (Engineering Science), Yeung, Benny (Engineering Science), Zhou, Teresa Chen-Yan (Engineering Science), Lei, Jessica Yin (Engineering Science); **Robert L. Bullen Admission Scholarship:** Fung, Simon Ming-Wo (Electrical Engineering); **Electrical & Computer Engineering Admission Scholarship:** Abbas, Nazar (Computer Engineering), Bradley, Stephanie (Electrical Engineering), Dusatko, Tomas (Computer Engineering), Fakhri, Payam (Computer Engineering), Figel, Slawomir C. (Electrical Engineering), Fung, Simon Ming-Wo (Electrical Engineering), Goldman, David Samuel (Computer Engineering), Lui, Raymond (Electrical Engineering), Sze, Vivienne (Electrical Engineering), Varodayan, David Prakash (Computer Engineering), Wong, Michelle Jin-Yen (Computer Engineering); **Walter Scott Guest Memorial Scholarship:** Blumenfeld, Ian (Engineering Science); **J. Edgar McAllister Foundation Admission Scholarship:** Chen, Chih Tung (Computer Engineering), Fakhri, Payam (Computer Engineering), Fan, Harry Yong (Computer Engineering), Felix, Marlyne (Chemical Engineering), Figel, Slawomir C. (Electrical Engineering), Hauch, Kristopher Gordon (Computer Engineering), Ho, Chi-Kin (Computer Engineering), Hon, Marcia Young (Computer Engineering), Lazic, Nevena (Computer Engineering), Lu, Xiao Li (Computer Engineering), Mak, Janson Chun Ho (Computer Engineering), Maltaric, Timur (Computer Engineering), Noordin, Hafiz Zulfikarali (Computer Engineering), Qureshi, Fahad (Electrical Engineering), Sequeira, Royston Shaun F. (Computer Engineering), Sung, Chien-Hung (Electrical Engineering), Tamkei, Kevin C. (Computer Engineering), Vasudevan, Suraj (Chemical Engineering), Wang, Ming Xia (lectrical Engineering), Wei, Chih-Chung Jonathan (Electrical Engineering), Wong, Michelle Jin-Yen (Computer Engineering); **Engineering Alumni Centennial Admission Scholarship:** Feng, Zhi Shun Chris (Engineering Science), Gliane, Richard Vincent (Engineering Science), Good, Moses Leo (Engineering Science), Winter, Jonathan Aaron (Engineering Science); **Lassonde Scholarship:** Abebe, Jonathan (Lassonde Mineral Eng), Conte, Andrew (Lassonde Mineral Eng), Ngai, Eliza (Lassonde Mineral Eng), Rocco, Justin (Lassonde Mineral Eng); **J.P. Bickell Foundation Admission Scholarship:** Butler, Mark James (Chemical Engineering); **John Hin Chung Tsang Memorial Scholarship:** Sung, Yu-Wei (Electrical Engineering)

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Cannonball!